

XX. *Synopsis of British Hemiptera-Heteroptera.*  
By EDWARD SAUNDERS, F.L.S. PART III.

[Read 2nd August, 1876.]

MICROPHYSIDÆ.

- A. Second joint of antennæ considerably longer than fourth .. .. . *Microphysa*.  
AA. Second joint of antennæ not longer than fourth .. *Myrmedobia*.

MICROPHYSA.

- A. ♂ moderately robust; cuneus dull; embolium reddish; ♀ brown, dull, robust; wing-cases covering half the body or more .. .. . *pselaphiformis*.  
AA. ♂ very slender; embolium dark; cuneus red; ♀ bright red, with the body black; shining and elongate; wing-cases not covering the body at all *elegantula*.

1. *pselaphiformis*, West. Fig. Doug. & Scott, pl. xvi. fig. 3, ♂ and ♀.

♂ Head, thorax and antennæ black-brown, the ocelli red. Thorax deeply channelled across the middle, the sides nearly straight. Elytra paler brown, the embolium red. Cuneus pale at the base, outwardly narrowly red; membrane dusky. Antennæ: 3rd joint two-thirds as long as 2nd, 4th slightly longer than 3rd. Femora brown; apices, tibiæ and tarsi paler.

♀ dull brown, much widened posteriorly, covered with a fine short golden pubescence; head on the vertex red. Thorax with a strongly raised rib across the middle. Elytra covering about half the body, slightly paler on the lateral margins; body darker than the elytra, and much dilated. Legs slightly paler than in the ♂.

Length, ♂, 1 line; ♀,  $\frac{3}{4}$  line.

Under bark, on palings, &c.

2. *elegantula*, Baer. Fig. Dougl. & Scott, Brit. Hem. pl. xvi. fig. 2, ♂ and ♀.

Much longer and narrower than the preceding. ♂ very delicate and shining. Head red, thorax reddish-brown, sides sinuate. Elytra brown, with the base and apex above the cuneus paler; cuneus bright red, membrane

dark; legs red, antennæ brown. ♀ bright red, elongate, the dilated body shining black; antennæ dusky towards the apex.

Length, ♂, 1 line; ♀,  $\frac{3}{4}$  line.

On trees and old palings; amongst lichens, &c.

### MYRMEDOBIA.

#### *Pseudophleps*, Dougl. & Scott.

- |  |   |                     |
|--|---|---------------------|
| I. ♂, sides of the thorax nearly straight, not dilated anteriorly. | } |                     |
| ♀ with the sides of thorax not reflexed.                           |   |                     |
| a. { ♂, 2nd joint of antenna distinctly longer than 3rd .. .. .    | } | <i>inconspicua.</i> |
| ♀, elytra rudimentary .. .. .                                      |   |                     |
| b. { ♂, 2nd and 3rd joints of antenna subequal ..                  | } | <i>coleoptrata.</i> |
| ♀, elytra covering the body .. .. .                                |   |                     |
| II. ♂, sides of thorax sinuate, much dilated in front ..           | } | <i>tenella.</i>     |
| ♀, sides of thorax reflexed in front .. .. .                       |   |                     |

#### 1. *coleoptrata*, Fall.

♂ brownish-black. Elytra paler, their cuneus and lateral margins dark. Thorax with a deeply impressed transverse line in front. Sides nearly straight, not dilated in front; base deeply sinuate; sides of the corium curved. Cuneus reddish-brown, very narrowly pale at the base outwardly; membrane dusky, slightly paler below the apex of the cuneus. Antennæ: 2nd and 3rd joints subequal.

♀ very convex, brown; head, thorax, scutellum and legs more or less red. Elytra covering the subglobose body.

Length, ♂,  $\frac{5}{8}$  line; ♀,  $\frac{2}{3}$  line.

Under leaves; on palings, &c.

#### 2. *tenella*, Zett.

♂ very like the preceding, but differing in the shape of the thorax, which has the lateral margins dilated and more or less reflexed near the anterior angles, thus giving them a sinuate form; the 3rd joint of the antennæ is also much shorter in comparison to the 2nd. It is also a rather larger species.

♀ brown, head and legs red; side margins of thorax reflexed; elytra quite rudimentary; body wider and less convex than in *coleoptrata*.

Length, ♂, 1 line; ♀,  $\frac{4}{5}$  line.

Under leaves, &c.

3. *inconspicua*, Dougl. & Scott. (Genus *Pseudophleps*.)

Smaller than either of the preceding. ♂ black, shining. Thorax with the sides not margined, and with a strongly marked transverse impression across the middle; membrane slightly dusky and iridescent; 2nd joint of the antennæ considerably longer than the 3rd and subequal to the 4th.

♀ with the elytra abbreviated as in *tenella*, but at once distinguished by the round, shining thorax, without reflexed margins or transverse depression.

Length  $\frac{2}{3}$  line.

♂, Weymouth; ♂ and ♀, Lowestoft, on the sandhills, at the roots of grass, &c.

This may, I fancy, prove to be eventually the *Signoreti*, Fieb.

## ANTHOCORIDÆ.

- A. Thorax constricted in front into a short waist.  
 B. Waist exceedingly short, sides strongly reflexed near the front angles .. .. . *Tetraphleps*.  
 BB. Waist not very short, sides scarcely reflexed in front.  
 C. Membrane with four veins .. .. . *Acompocoris*.  
 CC. Membrane with three veins.  
   a. Rostrum long, reaching beyond the anterior coxæ .. .. . *Temnostethus*.  
   b. Rostrum short, not reaching beyond the anterior coxæ .. .. . *Anthocoris*.  
 AA. Thorax not constricted into a waist in front.  
 B. Wings without a hook-like nerve to the cell.  
 C. Species robust, pubescent.  
   a. Head short, scarcely longer than its width between the eyes .. .. . *Brachysteles*.  
   b. Head much longer than its width between the eyes .. .. . *Cardiastethus*.  
 CC. Species elongate, glabrous .. .. . *Xylocoris*.  
 BB. Wings with a hook-like nerve to the cell.  
 C. Thorax truncate in front.  
   a. Front femora thickened .. .. . *Piezostethus*.  
   b. Front femora not thickened .. .. . *Triphleps*.  
 CC. Thorax emarginate in front .. .. . *Lyctocoris*.

## TETRAPHLEPS.

1. *vittata*, Fieb. Fig. Dougl. & Scott, Brit. Hem. pl. xvi. fig. 4.

Head and thorax black, the latter with the sides rounded in front and reflexed; surface transversely rugose and punctured, with a somewhat raised smoother portion in front of the middle; base largely and deeply sinuate;

scutellum black. Elytra castaneous, punctured, covered with fine, short, golden hairs; clavus inwardly paler. Membrane smoky-brown, the nerves and a spot below the cuneus pale. Legs reddish-brown; femora, except at the apices, black. Antennæ black, 2nd joint brown in the middle.

Length  $1\frac{1}{4}$  line.

On larches, firs, &c.

АКОМОКОРИС = *Temnostethus*, pars, D. & S.

1. Wider. Elytra paler; membrane obscurely white; apical joint of the antennæ decidedly shorter than third .. .. *pygmaeus*.
2. Narrower. Elytra darker; membrane dark, with the nerves pale; third and fourth joints of antennæ subequal .. .. *alpinus*.

1. *pygmaeus*, Fall. Fig. Dougl. & Scott, Brit. Hem. pl. xvi, fig. 5 (*lucorum*).  
= *lucorum*, D. & S.

Head, thorax and scutellum black, covered with golden, somewhat scattered pubescence. Thorax transversely wrinkled and punctured, with a smoother raised portion in front. Elytra pale brownish-yellow, covered with short golden hairs; membrane milky; legs pale testaceous, femora darker at the base. Antennæ testaceous, base and apex from the 2nd joint darker.

Length  $1\frac{1}{4}$  line.

On fir trees, &c.; common.

2. *alpinus*, Reut.

Narrower and darker than the preceding, with rather shorter pubescence; sides of the thorax less rounded at the anterior angles. Elytra much darker; the membrane longer and dusky, with its nerves pale; legs dark brownish-black; tibiæ slightly paler in the middle. Antennæ black, second joint brownish in the centre.

Length  $1\frac{1}{2}$  line.

Norwich and Scotland; on firs.

ТЕМНОСТЕТИУС.

- I. Elytra dark brown, with a white spot on the margin below the base .. .. . *pusillus*.
- II. Elytra pale brown, not spotted .. .. . *nigricornis*.

1. *pusillus*, II.-Schff. Fig. Wanz. Ins. fig. 977.

Black or brownish-black, a subhumeral spot and a small roundish spot at the base of the cuneus whitish. Membrane dusky, a spot at the base, and a transverse one below the apex of the cuneus, white. Thorax with

the sides nearly straight, slightly reflexed in front. Legs and antennæ black or brown; middle of the second joint of the latter and the tibiæ and tarsi pale.

Length 1—1½ line.

By beating oaks, &c.

Often with the elytra undeveloped.

2. *nigricornis*, Zett.

Black, shining. Antennæ entirely black, second joint a little longer than third and fourth together; rostrum, reaching to the middle of the mesosternum, dark piceous; pronotum with the side margins distinctly sinuate, the transverse channel of the disc deep, the base largely emarginate; hemelytra developed, brown. Cuneus blackish-brown, membrane blackish; the basal half whitish. Thighs piceous; tibiæ and tarsi dark ferruginous.

Length 3½ lines.

Perth; one specimen on *Pinus sylvestris*.

#### ANTHOCORIS.

1. Third joint of antennæ pale at the base; elytra shining .. *nemorum*.
2. Third joint of antennæ entirely dark; elytra not shining .. *nemoralis*.

1. *nemorum*, Linn. Fig. Dougl. & Scott, Brit. Hem. pl. xvi. fig. 6.

Shining. Head and thorax black, the posterior angles of the latter more or less brownish; its disk with a deep transverse channel behind the middle; basal portion of the surface transversely wrinkled and punctured. Scutellum black. Elytra pale yellowish-white, somewhat transparent; the apex of the clavus, a roundish spot on the disk of the corium behind the middle, and the membranal margin, brown; the brown colour often spreads all over the cuneus and the apex of the corium. Membrane white, with an apical spot, and generally a transverse band above the middle connected with it, brown. Legs testaceous, third pair sometimes with a black ring near the apex of the femora. Antennæ testaceous, first and fourth joints and the apex of the second and third black.

Length 1½—2 lines.

Common, by beating trees, &c. in summer.

2. *nemoralis*, Fab. = var. *Saxothamni*, D. & S.

Duller and flatter than the preceding. Head and thorax

black, punctured, the latter impressed in the middle transversely. Scutellum black. Elytra dull, the embolium and cuneus more shining and very coarsely punctured; brown with a paler subhumeral spot on the margin. Membrane dusky, with a basal spot, a spot below the cuneus on each side, and the nerves, pale. Legs reddish-testaceous. Antennæ black, base and extreme apex of second joint pale.

Length  $1\frac{1}{2}$ —2 lines.

Common, by beating, &c.

*A. sarothamni*, D. & S., is a dark, nearly black, variety of this species, with entirely black antennæ, and is found on the broom. I have, however, repeatedly found it with the paler forms and intervening varieties.

#### BRACHYTELES.

1. *pilicornis*, Muls. Fig. Dougl. & Scott, Brit. Hem. pl. xxi. fig. 4.

Short, ovate. Head and thorax black, thickly covered with golden hairs, the latter with a deep transverse impression behind the middle. Scutellum black. Elytra ochreous-brown, densely pubescent, with a paler lateral spot at the base, sometimes extending to the apex of the cuneus. Legs testaceous. Antennæ hairy, brown, base of the second joint paler.

Length 1 line.

"One specimen, Dr. Power," D. & S.

Having never seen a British example of this species, I have drawn up my description from a continental one. It is very like a *Triphleps* in general appearance, but its densely pubescent surface, smaller membrane and generic characters at once separate it.

#### CARDIASTETHUS.

1. *testaceus*, Muls. Fig. Dougl. & Scott, Brit. Hem. pl. xvii. fig. 5.

Bright testaceous, elytra somewhat more obscure; clothed with rather short golden hairs. Thorax with a raised smooth portion in front, surrounded at the base and sides by a punctured impression; base deeply sinuate. Scutellum shining. Elytra dull; membrane smoky brown, with a paler spot below the apex of each cuneus.

Legs and antennæ testaceous, the apex of the latter obscure.

Length 1 line.

Horsell and Chobham, by sweeping.

The bright yellow colour of this will separate it at once from its allies.

#### XYLOCORIS.

1. *ater*, Duf. Fig. Doug. & Scott, Brit. Hem. pl. xvii. fig. 6.

Elongate, black, shining; membrane dusky, clear white at the base; tibiæ pale. Antennæ obscurely brown; second joint paler, except at its apex.

Length 1 line.

Under bark, widely distributed.

#### PIEZOSTETHUS.

- I. Elytra pale yellowish-white.

a. Larger,  $1\frac{1}{4}$  line. Apical joints of antennæ very thin and filiform.. .. *galactinus*.

b. Smaller,  $\frac{2}{3}$  line. Apical joints of antennæ not very thin .. .. *formicetorum*.

- II. Elytra pale yellowish-brown; cuneus and embolium darker .. .. *cursitans*.

1. *galactinus*, Fieb. Fig. Dougl. & Scott, Brit. Hem. pl. xvii. fig. 2.

Head, thorax and scutellum pitchy black, shining; thorax slightly impressed on its basal half; scutellum deeply impressed at the apex; elytra ochreous-white, slightly clouded with brown at the apex; membrane pure milk-white; legs and antennæ pitchy brown; tibiæ paler.

Length  $1\frac{1}{4}$  line.

Common in stable refuse, manure heaps, &c.

2. *cursitans*, Fall. = *rufipennis*, D. & S. Fig. Hahn, Wanz. Ins. pl. lxxix. fig. 244 (*corticalis*).

Rather smaller than the preceding and with a distinctly shorter thorax. Head, thorax and scutellum pitchy brown, shining; elytra dull yellowish, the clavus reddish-brown, the embolium and cuneus pitchy; membrane clear milk-white; antennæ and legs pitchy brown, the tibiæ paler.

Length  $1\frac{1}{5}$  line.

Under bark; rare.

The undeveloped form has the elytra abbreviated and of a lurid brown colour.

3. *formicetorum*, Boh.

Scarcely half the size of the preceding; head, thorax and scutellum pitchy brown; elytra dull ochreous, densely pubescent, slightly darker towards the apex outwardly; membrane clear milky white; legs and antennæ pitchy brown, the tibiæ paler.

Length  $\frac{2}{3}$  line.

Scotland; in nests of *Formica rufa*.

## TRIPHLEPS.

1. All the tibiæ pale. Antennæ entirely pale, in ♂ not incrassated .. .. .. *minutus*.
2. Posterior tibiæ more or less piceous, ♀ often black. Antennæ not entirely pale, in ♂ incrassated .. *niger*.

1. *minutus*, Linn. Fig. Dougl. & Scott, Brit. Hem. pl. xvii. fig. 3.

Head and thorax black, shining; the latter with a strongly marked central transverse impression, deeply punctured and wrinkled posteriorly; scutellum black; elytra pale ochreous, punctured and finely hairy, sometimes with a dark cloud across the apex; membrane dusky, paler at the base; antennæ and legs testaceous, posterior thighs sometimes darker.

Length 1 line.

Common by sweeping, &c.

2. *niger*, Wolff. Fig. Wolff, Ic. Cim. fig. 161.

Var. *obscurus*, D. & S.

Smaller and more parallel-sided than *minutus*, with a thicker, rather denser pubescence on the elytra. ♂ with the elytra more or less pale or piceous, the apex widely black; ♀ sometimes coloured as the ♂, sometimes entirely black; legs: 1st pair pale, 3rd and 4th more or less pitchy, sometimes black. Antennæ in ♂ much thickened, sometimes with second and apical joints pale; ♀ with thinner antennæ.

Length  $\frac{3}{4}$  line.

Common by sweeping, especially on heaths.

*T. obscurus*, D. & S., is, I believe, only a large pale variety of this very variable species. Mr. Douglas has kindly lent me specimens for examination; but I can see no definite structural character in them to justify a distinct species being retained.



## LYCTOCORIS.

1. *campestris*, Fab. = *domesticus*, D. & S. Fig. Dougl. & Scott, Brit. Hem. pl. xvii. fig. 1.

Testaceous-brown, densely covered with golden hairs; mouth, lateral margins of thorax, basal half of the elytra, a small spot just above the cuneus, legs and base of 2nd joint of the antennæ, paler; membrane milky white, with a dusky cloud across the apex; 3rd and 4th joints of the antennæ filiform. Thorax impressed at the base on each side; elytra very closely and strongly punctured.

Length  $1\frac{1}{2}$  line.

Common in rubbish, thatch, &c.

## ACANTHIDÆ.

## ACANTHIA.

1. Covered with short hairs. Sides of the thorax widely depressed, especially near the front angles, and reflexed.
  - a. Larger. 3rd and 4th joints of antennæ together considerably more than twice as long as 2nd (inhabiting houses) .. .. . *lectularia*.
  - b. Smaller. 3rd and 4th joints of antennæ together subequal to twice the length of the 2nd (inhabiting pigeon cots) .. .. . *columbaria*.
2. Covered with long hairs. Sides of thorax narrowly depressed, scarcely widened in front and hardly reflexed.
  - a. Larger. Covered with long silky hairs; 3rd joint of antennæ decidedly longer than 4th .. .. . *pipistrelli*.
  - b. Smaller. Covered with long, somewhat bristly hairs; 3rd and 4th joints of antennæ subequal .. .. . *hirundinis*.

1. *lectularia*, Linn. Fig. Dougl. & Scott, Brit. Hem. pl. xvii. fig. 7.

Ferruginous, deeply punctured and covered with short pale hairs. Thorax widely depressed and reflexed at the sides, the reflexed margins much widened in front; body large and round. Antennæ: 1st joint short and stout, 2nd slightly longer than the fourth, 3rd much longer than the 2nd.

Length  $2\frac{1}{2}$ —3 lines.

In houses.

2. *columbaria*, Jenyns. Fig. Ann. Nat. Hist. iii. pl. v. fig. 1.

Very like the preceding, but smaller and rather rounder in the body; the sides of the thorax rather more reflexed;

the antennæ rather shorter, the third joint not being so long in proportion to the fourth.

Length 2 lines.

In pigeon cots; Norwich, &c.

3. *pipistrelli*, Jenyns, Fig. Ann. Nat. Hist. iii. pl. v. fig. 3.

Like the others of the genus in colour, but more elongate in shape, and at once distinguishable by the long silky pubescence; besides these characters, the margins of the thorax are much less widely depressed, scarcely reflexed or widened in front.

Length 2 lines.

Very rare. In bats' nests.

4. *hirundinis*, Jenyns, Fig. Ann. Nat. Hist. iii. pl. v. fig. 2.

Smaller than any of the others, with long hairs like *A. pipistrelli*, but not so silky and evenly disposed; thorax smaller and squarer than any of the above, and with the sides very narrowly margined; the antennæ are also thicker and shorter.

Length  $1\frac{3}{4}$  line.

Rare. In martins' nests.

### CERATOCOMBIDÆ.

Thorax convex, not nearly twice as wide as long .. .. *Ceratocombus*.  
 Thorax depressed, twice as wide as long at the base .. .. *Cryptostemma*.

#### CERATOCOMBUS.

1. *colcoptratus*, Zett. = *muscorum*, D. & S. Fig. Dougl. & Scott, Brit. Hem. pl. xxi. fig. 5.

Brown, legs and antennæ paler. Head with numerous long fine hairs scattered over its surface. Thorax convex, rather wider behind; the sides very slightly rounded. Elytra widest behind, covering the body. Antennæ: 1st and 2nd joints thickened, the rest very fine and filiform.

Length 1 line.

Moss; Norfolk, Esher, &c.

#### CRYPTOSTEMMA.

1. *alicnum*, H.-Schiff. Fig. Dougl. & Scott, Brit. Hem. pl. xvii. fig. 8.

Pale greyish-brown, covered with very fine adpressed hairs, giving it a soft, somewhat downy appearance.

Thorax flat, much widened posteriorly. Elytra with the nerves very strongly marked; sides subparallel; base of the cuneus very narrowly paler; apex widely rounded.

Length  $1\frac{1}{2}$  line.

On the banks of streams, &c.; Scarborough, North Wales, Kerry (Ireland), South Devon, Edinburgh, &c.

### REDUVIDÆ.

- A. Legs exceedingly long and slender .. .. *Ploiaria*.  
 AA. Legs not very long and slender.  
 B. Head much produced in front; antennæ inserted at a considerable distance in front of the eyes .. *Pygolampis*.  
 BB. Head not much produced in front; antennæ inserted just in front of the eyes.  
 a. Antennæ very thin; filiform at the apex .. *Reduvius*.  
 b. Antennæ not thin; not filiform at the apex .. *Coranus*.

### PLOIARIA.

- I. Larger, legs and antennæ with long hairs .. .. *vagabunda*.  
 II. Smaller, legs and antennæ not hairy .. .. *culiciformis*.

1. *vagabunda*, Linn. Fig. Dougl. & Scott, Brit. Hem. pl. xviii. fig. 1.

Elongate, pale ochreous; head and thorax with darker markings near the margins; the margins of the thorax narrowly white; posterior angles produced slightly backwards and somewhat lobate; scutellum with a spine at the base. Elytra mottled with brown, with two dark-brown spots near the extremity at the sides of the membrane; membrane brown, finely reticulated with white. Legs and antennæ extremely long and thin, whitish, finely hairy and banded with narrow brown bands.

Length  $3\frac{1}{2}$  lines.

In ivy, &c., by beating; local.

2. *culiciformis*, De G. Fig. De Geer, Mem. iii. pl. xvii. fig. 1—8.

= *erratica*, Dougl. & Scott.

Very like the above, but much smaller, with slightly shorter antennæ, and more distinctly marked elytra, and a shorter, almost obsolete spine on the scutellum. The legs and antennæ also have no long hairs, as in *P. vagabunda*.

Length  $2\frac{1}{2}$  lines.

In thatch, &c.; not rare.

## PYGOLAMPIS.

1. *bidentata*, Fourc. Fig. Dougl. & Scott, Brit. Hem. pl. xviii. fig. 4.  
= *bifurcata*, Dougl. & Scott.

Dark, dull brown, elongate; head nearly as long as the thorax, spined beneath and at the back. Antennæ inserted quite near its apex; 1st joint of the antennæ thick; the rest much thinner and generally turned backwards; rostrum very thick. Thorax with two large spines beneath; above flat and subtrapezoidal. Elytra shorter than the body; connexivum with a pale spot at the junction of each segment. Legs rather paler than the rest of the insect; front tibiæ ringed with brown.

Length 7 lines.

Very rare, near Bridgenorth, Salop.

## CORANUS.

1. *subapterus*, De Geer. Fig. Dougl. & Scott, Brit. Hem. pl. xviii. fig. 2.

Black, covered with a dense adpressed grey pubescence, and with long, scattered hairs on the head, thorax, legs and antennæ; eyes prominent, large; head much narrowed behind. Thorax constricted in the middle; scutellum tuberculate, almost spinose. Elytra almost always rudimentary, very narrow, with a short, black, shining membrane; body subovate, with a somewhat naked line down the middle, and a naked spot on each side of each segment; connexivum pale, spotted with black. Legs with the tibiæ more or less pitchy.

Length 4—5 lines.

Deal, Weybridge, Addington, &c.; under *Erodium*, not rare.

## REDUVIUS.

1. *personatus*, Linn. Fig. Dougl. & Scott, Brit. Hem. pl. xviii. fig. 3.

Brown, hairy, base of the tibiæ narrowly paler; head small, neck much constricted. Thorax with a wide central furrow, much widened posteriorly; surface smooth in front; rugose behind, base rounded. Scutellum with a raised V-like smooth carina, the rest rugose. Elytra pitchy brown. Antennæ: 1st joint brown, apex paler; rest more or less pale.

Length  $7\frac{1}{2}$ —8 lines.

In houses, fowl-houses, &c.; often flies by night.

## NABIDÆ.

- I. Dull, colouring obscure .. .. . *Nabis*.  
 II. Brilliant shining .. .. . *Prostemma*.

## NABIS.

- I. Bright chocolate brown; legs with the thighs marbled.  
 a. Antennæ longer than the body .. .. *brevipennis*.  
 b. Antennæ not so long as the body .. .. *lativentris*.
- II. Not bright chocolate brown, thighs finely-spotted, not marbled.  
 A. Apex of posterior thighs black .. .. *major*.  
 AA. Apex of posterior thighs not black.  
 B. Dark greyish-brown, tolerably robust; body above black, with the margins pale .. .. *flavomarginatus*.  
 BB. Pale ochreous, or ochreous-brown, elongate; body not black above, but sometimes very wide in the ♀.  
 C. First joint of the antennæ longer than the head. Elytra almost always rudimentary.  
 a. Sides of the body foliaceous; body in the ♀ dilated .. .. *limbatus*.  
 b. Sides of the body not foliaceous; body in the ♀ not dilated .. .. *Powelli*.  
 CC. First joint of the antennæ shorter than the head. Elytra developed.  
 D. Thorax at the base wider than long; anterior margin not half the width of the base *ferus*.  
 DD. Thorax at the base narrower than long; anterior margin half the width of the base.  
 a. Wider, paler (pale ochreous); antennæ longer (found in grassy places, &c.) .. .. *rugosus*.  
 b. Narrower, darker (reddish-brown); antennæ shorter (found on heath) .. .. *ericetorum*.

1. *brevipennis*, Hahn. Fig. Hahn, Wanz. Ins. iii. pl. lxxxiii. fig. 253.

Chocolate brown, finely pubescent; head, thorax in front and body more obscure. Elytra very short, covering about half the body or not quite half. Connexivum with a red spot on the margin, at the base of each segment. Legs pale ochreous, femora marbled and banded with greyish-brown; two front pairs of tibiæ with a band just below the base, a wider one above the middle, and the apex dark; posterior ones at the base and apex dark, and with a pale narrow band below the dark basal one. Antennæ long, finely pubescent; base of the first joint and a band near the apex of the second black.

Length 4—4½ lines.

On hazel, &c.; Wimbledon, Woking, Reigate.

The connexivum of the ♀ is much wider than that of the ♂ and the entire insect larger. Scarcely ever found with developed elytra.

2. *lativentris*, Boh. Fig. Hahn, Wanz. Ins. i. tab. 6, fig. 24 (*subapterus*)  
= *apterus*, D. & S.

Somewhat like the preceding but smaller, chocolate brown, finely pubescent, side of the thorax in front dark brownish-black; scutellum black, with the sides paler. Elytra more or less mottled, longer than in the former species, covering nearly three quarters of the body; connexivum with a red band at the base of each segment. Thighs mottled, with two irregular dark bands towards the apex; tibiæ much as in the preceding. Antennæ much shorter.

Length 3½—4 lines.

Very common by sweeping, &c.

3. *major*, Costa. Fig. Dougl. & Scott, Brit. Hem. pl. xviii. fig. 5.  
= *flavomarginatus*, D. & S. (Brit. Hem.).

Greyish-brown, finely pubescent; head with a central stripe. Thorax more or less mottled with brown, with a stripe down the middle and one on each side black. Scutellum black, with the base on each side pale; clavus with the nerves dark; corium darker brown, with the nerves paler, lateral margins at the base pale ochreous; connexivum pale, dark at the extreme apex; legs ochreous, front femora with a wide black longitudinal stripe, intermediate pair spotted with brown and more or less dark at the apex; hind pair widely black at the apex: beneath ochreous, with brown markings.

Length 4—4½ lines.

Common under refuse, &c.

4. *flavomarginatus*, Scholz.

Brown, very like the preceding but scarcely pubescent except on the exposed part of the abdomen, with much longer 1st joint to the antennæ, with entirely pale legs and almost always with undeveloped elytra. Head, thorax and scutellum with a black central line, and the thorax with a short lateral one in front. Elytra ochreous-brown, with the nerves slightly paler, generally undeveloped, with

their apices extending to about the middle of the body. Abdomen above black, pubescent, with a central vitta, and the connexivum pale; down the middle of the central vitta is a narrow dark line. Legs testaceous, thighs spotted with brown; 1st joint of the antennæ considerably more than half the length of the second.

Length 4—4½ lines.

Chobham, Reigate, Aberdeen, Rannoch, Manchester, &c.

5. *limbatus*, Dahlb.

Pale ochreous; head, thorax and scutellum with a dark central line; the thorax also with several brown markings about the middle. Elytra short and rudimentary, considerably rounded at the apices outwardly; body with three dark lines down the middle, the central one the narrowest and darkest; connexivum pale and foliaceous, sometimes with a reddish line on its inner margin; legs ochreous; thighs spotted with brown, apex of tarsi black; antennæ ochreous.

♀ differs from the ♂ in having the body suboval.

Length 4—4½ lines.

Not rare by sweeping, &c.

6. *Poweri*, E. Saund.

Rather larger than the preceding and paler. Head, thorax, scutellum and body with a dark central line obscurely marked on the head and nearly black on the body. Thorax much longer than in *limbatus* and proportionately rather narrower in front; rudimentary elytra longer and truncate, and only slightly rounded at the exterior angles; body pubescent, rather more elongate; connexivum narrow and not foliaceous, pale or reddish. On each side of the black dorsal line of the body is a narrow pale line, outside which is another dark one, narrow in the ♂, wide in the ♀. Legs and antennæ ochreous; thighs spotted with brown, considerably longer than in *limbatus*. ♂ and ♀ alike in having the body elongate and narrow.

Length 4¾—5½ lines.

In a marshy place near Chobham, Surrey, by sweeping.

7. *ferus*, Linn. Fig. Hahn, Wanz. Ins. iii. tab. 83, fig. 252.

Pale greyish-ochreous; head with a dark longitudinal spot between the eyes, ocelli red; thorax much narrowed

in front and somewhat swollen at the base, with a dark median line in front, united to the base by a very narrow, obscure one; base wide, more than twice as long as the anterior margin; scutellum dark, with a pale spot on each side; elytra of an uniform pale greyish-ochreous colour; the nerves, if anything, a little paler, with a small spot at the apex of the clavus, and two on the membranal margin of the corium, black; membrane slightly dusky, the nerves darker; legs and antennæ of the same colour as the rest of the insect: thighs spotted.

Length  $3\frac{1}{2}$  lines.

Common by sweeping, &c.

8. *rugosus*, Linn. Fig. Léon Dufour, *Recherches*, 62, pl. v. fig. 55.

= *dorsalis*, D. & S.

Pale ochreous; head, thorax and scutellum with a dark central band; base of the thorax not more than twice as long as the anterior margin, disk with numerous brownish-red irregular markings; elytra with the nerves paler than the ground colour; a very small spot behind the middle, and another on the membranal margin of the corium, black; membrane dusky, with darker nerves, seldom fully developed; legs and antennæ ochreous; femora spotted.

Length  $3\frac{1}{4}$  lines.

Common under herbage, in rubbish, &c.

Differs from *ferus* in the shape of the thorax and its less pale unicolorous appearance.

9. *ericetorum*, Scholz.

Extremely like the preceding, but narrower and darker; being of a reddish-brown, and with rather shorter antennæ and shorter anterior femora.

Length  $3\frac{1}{4}$  lines.

Common on heaths under *Erica*.

#### PROSTEMMA.

1. *guttula*, Fab. Fig. Dougl. & Scott, *Brit. Hem.* pl. xviii. fig. 6.

Greenish-black, shining, with long, scattered hairs. Elytra and legs scarlet (elytra abbreviated).

Length  $4\frac{1}{4}$  lines.

Very rare; Charlton, Sandwich, Manchester.



## SALDIDÆ.

## SALDA.

- I. Ocelli placed closed together, but not contiguous.
- A. Sides of the thorax pale.
- a. Insect larger, densely pubescent .. .. *pilosa*.  
 b. Insect smaller, not densely pubescent .. .. *lateralis*.
- AA. Sides of the thorax not pale.
- B. Species large.
- C. Covered with long hairs .. .. *scotica*.
- CC. Not covered with long hairs.
- D. Species brown-black, gold-pubescent .. .. *littoralis*.
- DD. Species black, glabrous .. .. *morio*.
- BB. Species smaller.
- C. Thorax and scutellum covered with black, bristly hairs .. .. *pilosella*.
- CC. Thorax and scutellum not covered with black, bristly hairs.
- D. Sides of thorax straight, and with sides of elytra black, not spotted until just above the apex.
- a. Apical joint of antennæ longer than 3rd .. .. *orthochila*.  
 b. Apical joint of antennæ shorter than 3rd .. .. *conspicua*.
- DD. Sides of thorax curved, or if straight, as in *C. album*, then with the sides of the elytra spotted near the middle.
- E. Elytra with its sides entirely pale, except at the extreme base.
- a. Short and round, pubescence silvery, pale margin widening towards the apex .. .. *marginalis*.  
 b. Oblong-oval, without silvery hairs, pale margin linear throughout .. .. *opacula*.
- EE. Elytra with its sides not entirely pale.
- F. Sides of thorax straight, two front pairs of tibiæ banded .. .. *C-album*.
- FF. Sides of thorax not straight, tibiæ not banded.
- G. Deep black, all the markings dull white; tibiæ black or obscure, narrowly pale above the apex .. .. *arenicola*.
- GG. Black or brownish-black, all the markings not white.
- II. Markings more or less obscure, with much tendency to spread and amalgamate, sometimes to such an extent as to make the elytra entirely pale, except at the extreme base .. .. *pallipes*.
- III. Markings more distinct, although sometimes obscure; in pale forms the markings become paler, but do not tend to unite .. .. *saltatoria* et vars.
- Var. 1? Larger markings more obscure .. .. var. *fucicola*.  
 Var. 2? Much more densely pubescent, so as to give quite a golden aspect to the specimens .. .. var. *vestita*.

## II. Ocelli contiguous.

- A. Second joint of antennæ pale, except at the extreme base .. .. . *Cocksii*.  
 AA. Second joint of antennæ black.  
 a. Covered with black, bristly hairs.. .. *elegantula*.  
 b. Not covered with bristly hairs .. .. *cineta*.

1. *pilosa*, Fall. (Pl. XII. fig. 11.)

Entire insect densely pilose, with upright black hairs. Head and thorax black; the sides of the latter widely pale. Elytra: clavus black, with the apex ochreous; corium very variable in colour, sometimes almost entirely black in the ♂, with an irregular pale patch on the lateral margin, near the middle, and a smaller one near the apex; at other times ochreous, with only the extreme base and apex and a small round spot behind the middle black. Legs ochreous, thighs spotted, extreme apices of tibiæ and tarsi black. Antennæ testaceous, last two joints more obscure.

Length 2—2½ lines.

Bristol; Broughton, Lancashire; Sandwich; Pegwell Bay.

2. *lateralis*, Fall. Fig. Dougl. & Scott, Brit. Hem. pl. xvii. fig. 9.

= *pulchella*, D. & S.

Somewhat shining, deeply punctured, and covered with exceedingly short hairs. Head and thorax black; mouth and the sides of the thorax pale whitish. Scutellum black, with its apex, in pale specimens, sometimes pale. Elytra very variable in colour, seldom with the membrane fully developed; in developed specimens the elytra are black, with the apex of the cuneus, a large triangular patch on the lateral margin at the base, and a smaller one at the apex, pale whitish; the apex itself black; membrane milky white, extending considerably beyond the apex of the body, veins brown; in undeveloped specimens the elytra vary from being black, with the lateral margins at the base and apex pale, to being entirely pale; between these extreme forms constant varieties occur. Legs pale; two lines on each thigh, and the extreme apices of the tibiæ and tarsi, black. Antennæ pale, rather more dusky towards the apex.

Length 1½—2 lines.

Very common at most of our south coast places, also at Deal, &c.

The developed form is very rare. I took several last year at Worthing, and they are all alike in the style of markings.

3. *scotica*, Curt. (Pl. XII. fig. 8.)

= *riparia*, Dougl. & Scott.

Black, covered with black semi-erect hairs, and short, pale, adpressed pubescence. Thorax with the sides straight. Elytra with the sides gently rounded; disk of each with several pale, roundish spots, varying much in number, and often entirely obliterated; membrane dark, the nerves black. Legs black, a line along the top of each thigh, a band above the apex of each tibia, and the 2nd joint of the tarsi, pale. Antennæ black.

Length  $2\frac{3}{4}$  lines.

Scotland; Bettws-y-Coed, Wales, and north of England; not rare.

4. *littoralis*, Linn. (Pl. XII. fig. 1.)

Black, densely covered with adpressed, golden hairs, so as to give it a brownish appearance. Sides of the thorax slightly rounded; disk with a deep, transverse impression. Elytra rather widely reflexed at the sides; disk occasionally with a few obscure, round, pale spots; membrane very short, pale, with the veins thick and black. Legs pale; thighs obscurely spotted; front pair black beneath; tibiae and tarsi with their apices obscure.

Length  $2\frac{3}{4}$  lines.

Common on marshy ground, especially by the sea-side.

5. *morio*, Zett. (Pl. XII. fig. 4.)

Black, glabrous, similar in shape to the preceding. Apices of thighs, the tibiae and the first two joints of the tarsi testaceous.

Length  $2\frac{3}{4}$  lines.

Rare; Scarborough.

6. *pilosella*, Thoms. (Pl. XII. fig. 12.)

Head, thorax and scutellum black, densely covered with black, semi-erect, pilose hairs and with a short, golden, adpressed pubescence; sides of the thorax nearly straight. Elytra covered with short black hairs and golden pubescence; clavus black, with the apex pale; corium pale, with the base and a few markings at the side black; the disk with a few indistinct white markings; membrane pale, the nerves and an oblong spot between each two brown.

Legs pale, a black line beneath each thigh, a line of dark spots above; tibiæ more or less obscure at the base; antennæ black, 1st joint and apex of 2nd pale.

Length 2 lines.

Not rare by the sea coast, on marshy ground.

The upright pubescence of the head, thorax and scutellum is the distinguishing feature of this species.

7. *orthochila*, Fieb. (Pl. XII. Fig. 3.)

Black, with fine scattered golden hairs intermixed with the short, scarcely visible, black ones; thorax somewhat brassy, its sides straight; scutellum slightly swollen and subrugose; elytra widely but slightly reflexed at the sides; clavus with a pale spot near its apex; corium with numerous, round, yellowish spots about the disk, and a larger one on the lateral margin just above the apex; membrane dull yellowish, black at the base and with a black spot below the apex of the cuneus; nerves black. Legs pale, thighs sometimes dark beneath; tibiæ at their extreme base and apex black; tarsi black at the apex; antennæ black, basal joint testaceous.

Length  $1\frac{3}{4}$ —2 lines.

Not common; Scotland, Penzance, Addington Hills, Snowdon, Llangollen, Lincolnshire.

The perfectly straight sides of the thorax, the very projecting eyes and the disposition of the spots on the elytra divide this and the following from the others of the genus.

8. *conspicua*, Dougl. & Scott. Fig. Ent. Mo. Mag. vol. iv. pl. i.

Black; thorax considerably longer than in the preceding, with a few golden hairs, its sides straight and deeply impressed; scutellum subrugose; elytra black, in parts with a velvety appearance, its sides impressed near the base; clavus with a small spot near the apex; corium with numerous pale round or oblong spots on the disk and a larger subtriangular one on the lateral margin just above the apex; membrane pale yellowish-brown, its base and the nerves black, and with an oblong black spot between each pair of nerves. Legs: thighs testaceous-brown, pale at the apex; tibiæ pale, the base and apex narrowly darker; tarsi with the apex dark; antennæ black, basal joint pale below; apical joint not quite so long as the 3rd.

Length 2 lines.

Rare; Invercaimoch, Rannoch.

Closely allied to *riparia*, Fall.; but differs in the colour and shape of the markings, and in the shorter 2nd joint of the antennæ.

9. *marginalis*, Fall. (Pl. XII. fig. 6.)

Small and roundly oval; dull black, with scattered, short, silvery-white hairs. Head, thorax and scutellum very finely rugose, the thorax scarcely impressed at the sides. Elytra black; its sides, except at the extreme base and apex, pale; the colour spreading at the apex, and generally also above the middle; membrane obscure. Thighs pitchy brown, the apices paler; tibiæ and tarsi testaceous, their extreme apices black. Antennæ: 1st and 2nd joints testaceous; the other two obscure brownish-black.

Length  $1\frac{1}{8}$  line to  $1\frac{1}{2}$  line.

Rare; Chobham Common, August, 1875, and Dorchester, in damp spots on the heath.

A most distinct species.

10. *opacula*, Zett. (Pl. XII. fig. 13.)

Elongate oval, black, sides of the thorax widely impressed. Scutellum and clavus with golden hairs, the latter with an obscurely pale spot near the apex. Corium with a few obscure pale markings; lateral margin, except at the base and extreme apex, narrowly testaceous; membrane obscure, its outer margin testaceous; nerves black; legs testaceous; apex of tibiæ and tarsi black; antennæ obscure.

Length  $1\frac{1}{2}$  line.

Rare; Scotland, Braemar.

11. *C-album*, Fieb. (Pl. XII. fig. 2.)

Shorter and more regularly oval than most of the species of this genus; rather densely covered with golden hairs. Head and thorax bronzy-black, with the sides straight or nearly so; discal impression very shallow but well defined. Elytra with the sides much rounded; clavus with a small yellow spot at the apex; corium with a large yellow spot on the middle of the lateral margin and a smaller one near the apex, and with several irregular yellow and whitish marks on the disk; near the apical angle is a small, round, white speck. Membrane yellowish, the nerves and a spot between each pair black. Legs testaceous; thighs irregularly spotted; tibiæ black at the

extreme base and apex; 1st and 2nd pairs each with an obscure median ring; tarsi black at the apex. Antennæ: 1st and 2nd joints testaceous, 3rd and 4th black.

Length 2 lines.

Not common; Isle of Wight, Newcastle, Cumberland, Isle of Man, &c.

The short oval shape, straight-sided thorax and banded tibiæ, distinguish this species from all the others.

12. *arenicola*, Scholz. (Pl. XII. fig. 5.)

Deep black; thorax with the sides slightly rounded. Elytra with scattered golden depressed hairs, especially on the clavus; clavus with a small pale spot near the apex; corium with a large transverse spot near the middle of its lateral margin, a smaller one near the apex and numerous others on the posterior portion of the disk pale whitish. Membrane dark at the base, the cell nerves black; cells pale, with an oblong dark spot in each; below the apex of the cuneus is a small pale spot, and immediately below it a longitudinal black one. Thighs pale, with a black line beneath and a row of black spots above; front tibiæ pale, sometimes with a black longitudinal line; 2nd and 3rd pairs black, with a narrow apical ring pale, sometimes also pale at the base; tarsi black at the apex.

Length 2 lines.

Rare; Portsmouth, Bournemouth, Isle of Wight, &c.

The almost white markings, the large transverse marginal spot on the corium, and the dark tibiæ, separate this readily from *S. saltatoria*, &c.

13. *pallipes*, Fab.

= *palustris*, Dougl.

Black, more or less covered with adpressed golden hairs. Thorax with the sides slightly rounded; base widely sinuate, discal impression distinct and narrow. Scutellum with a semilunate impression. Elytra short oval or elongate oval, with the costæ more or less pale; clavus with a small yellowish-white spot near the apex; corium with pale markings, very variable, the spots and markings often (*pallipes*) becoming confluent, and sometimes leaving the whole corium, with the exception of the base and a few lateral spots, pale. Membrane pale, smoky; sometimes darker at the base, with the cell-nerves black; cells with an oval dark spot in each. Legs pale, thighs

more or less spotted; tibiæ and tarsi with their extreme apices black; the former in dark varieties more or less dark at the base. Antennæ: 1st joint pale, 2nd pale at the apex, 3rd and 4th black.

Length  $1\frac{1}{2}$ —2 lines.

Common on the south coast; Worthing, Littlehampton; also at Chobham, &c.

14. *saltatoria*, Linn. (Pl. XII. fig. 7.)

= *fucicola*, Dougl. & Scott.

= *marginella*, Dougl. & Scott.

Var. = *vestita*, Dougl. & Scott.

Exceedingly like the preceding, of which it may be but a variety. It differs in having the markings on the elytra more numerous, more decided, and without the tendency to spread observable in that species. The spots get paler, but they retain their form, and I have never seen any specimens with pale elytra. Although so closely allied to the above that I cannot describe the differences in words, yet there is a general look about *saltatoria* by which, I believe, anyone could distinguish it.

Length  $1\frac{1}{2}$ —2 lines.

Common in damp places. Var. *vestita*, Scotland.

Var. *vestita*, Dougl. & Scott. Pubescence much denser, giving quite a golden aspect to the specimen.

I have placed under the two preceding heads what have been considered by some authors as six distinct species; but, after a careful examination of a great number of specimens of my own, as well as many kindly lent to me by Mr. Douglas and Dr. Power, I can come to no other conclusion. Even between the two species I have admitted I can see no distinguishing structural characters, and the markings vary to such an extent that it is only on their general style that one can place any reliance.

15. *elegantula*, Fall. (Pl. XII. fig. 14 (antenna).)

= *Flori*, Dohrn, &c.

Head, thorax and scutellum black, shining, covered with long, erect, black hairs; eyes very large and prominent; sides of the thorax converging rapidly in straight lines until they almost reach the anterior margin, then subparallel; discal transverse impression very wide and deep; base sinuate. Elytra black, dull, covered with long, black, erect hairs, and a fine golden adpressed pubescence; the lateral margins, from just below the base,

widely ochreous, the colour spreading at the apex and just above the middle, along the nerve of the corium; close to the apex, where the pale colour spreads inwards, is a small, round, clear, whitish spot, and on the disk are often a few irregular, glaucous or milky spots. Membrane very small, ochreous, the nerves dark. Legs testaceous. Antennæ black, apex of basal joint and sometimes a spot on the apical joint yellow.

Length  $1\frac{1}{2}$ — $1\frac{3}{4}$  line.

Rare; banks of the Thames, near Hammersmith, &c.

16. *Cocksii*, Curt. (Pl. XII. figs. 10 and 15 (antenna).)  
= *elegantula*, Dougl. & Scott.

So like the preceding that it is unnecessary to do more than point out its distinguishing characters. The antennæ are considerably dilated at the apex, and the second joint is yellow, except at its extreme base. These characters are so pronounced that the species may be at once separated from *elegantula*.

Length  $1\frac{1}{2}$ — $1\frac{3}{4}$  line.

Not rare in damp places, *Sphagnum*, &c.

This is evidently not Costa's *geminata*, a very distinct species of which I have several from Dr. Ferrari of Italy, and which has been also named *venustula* by Mr. Scott, from a var. with the apical joint of the antennæ spotted.

17. *cincta*, H.-Schff. (Pl. XII. fig. 9.)

Somewhat like the two preceding species, but very different on examination. The surface has not the erect black hairs of the others, and the thorax is less rapidly constricted in front; the elytra are more elongate and the sides less rounded; the membrane much larger, &c. (These latter characters, however, probably depend on development. *Cincta* appears always to be found fully developed, whereas *elegantula* and *Cocksii* are almost always not so. I have a single specimen of *Cocksii* from South Europe, with the full membrane, and in this case the shape of the elytra is very similar to that of *cincta*.) The pale colour at the margin of the corium is much narrower, and does not spread either in the middle or at the apex. The antennæ are much thinner and black, the apex of the 1st joint only pale.

Length  $1\frac{1}{2}$  line.

Not rare in damp places.



## HYDRODROMICA.

- I. Head very long and narrow, widening in front .. .. *Hydrometra*.
- II. Head short.
- A. Antennæ four-jointed.
- B. Rostrum four-jointed .. .. *Gerris*.
- BB. Rostrum three-jointed.
- C. All the tarsi two-jointed .. .. *Microvelia*.
- CC. At least the two posterior pairs of tarsi three-jointed.
- a. Antennæ short, not nearly as long as the body; thighs without long projecting hairs *Velia*.
- b. Antennæ long, nearly as long as the body; thighs with long projecting hairs .. .. *Mesovelia*.
- AA. Antennæ with more than four joints .. .. *Hebrus*.

## HYDROMETRA.

1. *stagnorum*, De Geer. Fig. Dougl. & Scott, Brit. Hem. pl. xix. fig. 7.

Very elongate, black; more or less rufescent about the thorax; legs very long and thin, testaceous. Antennæ inserted almost at the apex of the head.

Length 5—6 lines.

Found walking about on the surface of water; common. Its peculiar shape and habit distinguish it from all its allies.

## GERRIS.

- I. Sixth segment of the abdomen produced at each side into a more or less elongate spine.
- A. More or less ferruginous; first joint of the antennæ shorter than the second and third together .. .. *rufoscutellata*.
- AA. Black; first joint of the antennæ longer than the second and third together.
- a. Posterior tarsi about one-third as long as the tibiæ; second joint not half as long as the first .. .. *paludum*.
- b. Posterior tarsi not one-fourth as long as the tibiæ; second joint more than half as long as the first .. .. *Najas*.
- II. Sixth segment of the abdomen produced and broadly dentate at each side, but not spinose.
- A. Thorax more or less rufescent in parts.
- B. Larger and more robust; very wide across the region of the intermediate coxæ .. .. *costæ*.
- BB. Smaller and narrower, not very wide across the region of the intermediate coxæ.
- a. Longer; first joint of posterior tarsi almost twice the length of the second .. .. *thoracica*.
- b. Shorter; first joint of posterior tarsi not nearly twice the length of the second .. .. *aspera*.

- AA. Thorax entirely black.
- B. Very wide across the region of the intermediate coxæ; posterior tibiæ and tarsi together as long as the femora .. .. . *gibbifera*.
- BB. Not very wide across the region of the intermediate coxæ; posterior tibiæ and tarsi together not so long as the femora.
- C. Posterior tibiæ and tarsi together not quite so long as the femora.
- a. Anterior femora chiefly luteous, ♂ with the abdomen not toothed beneath .. *lacustris*.
- b. Anterior femora black, red at the extreme base; sixth segment of abdomen toothed beneath, in ♂ .. .. . *odontogaster*.
- CC. Posterior tibiæ and tarsi together about two-thirds the length of the femora .. .. . *argentata*.

1. *rufoscutellata*, Latr. Fig. H.-Schff. Wanz. Ins. ix. pl. ccc. fig. 924.

Head black. Thorax rufescent, with a paler central line and a dark spot on each side of it near the anterior margin. Elytra brownish; the costæ black and the interstices whitish in their centres; legs and antennæ rufescent beneath, covered with silvery,—in some light golden, sericeous hairs.

Length  $6\frac{1}{2}$  lines.

Carlisle.

2. *paludum*, Fab. Fig. H.-Schff. Wanz. Ins. ix. pl. ccc. fig. 926.

Entirely black above, except the edges of the abdomen; beneath silvery white. Thorax with a fine narrowly-raised central line; posterior angles somewhat prominent. Posterior femora distinctly longer than the tibiæ and tarsi together. First joint of the antennæ not quite so long as the other three together.

Length 6— $6\frac{1}{2}$  lines.

Ponds, &c., rare; Caterham, Eltham, &c.

3. *Najas*, De Geer. Fig. H.-Schff. Wanz. Ins. ix. pl. ccc. fig. 925.

Very like the preceding, but more elongate and generally without clytra. Posterior femora scarcely longer than the tibiæ and tarsi together. First joint of the antennæ as long as the other three together; it may also be distinguished by the characters given in the table at the head of the genus.

Length 6— $6\frac{1}{2}$  lines.

Common on running water, &c.

4. *costæ*, H.-Schff. Fig. H.-Schff. Wanz. Ins. ix. pl. ccci. fig. 927.

Dark blackish-brown. Thorax with a reddish-brown patch posteriorly, and with the dorsal line in front of the same colour. Elytra dark brown between the black *costæ*. Sides of the body reddish-yellow. Legs and antennæ brownish; the latter darker at the apex. Body silvery; much produced about the region of the intermediate coxæ, as in *gibbifera*, giving the insect a broad, rather clumsy appearance.

Length 6 lines.

Scotland, Loch Rannoch, &c.

5. *thoracica*, Schum. Fig. H.-Schff. Wanz. Ins. ix. pl. ccci. fig. 928.

Brownish-black; pronotum posteriorly and at the sides beneath yellowish; there is also a yellow spot indicating the position of the dorsal line on the anterior margin. Elytra brownish; the *costæ* black. Legs brown, paler beneath; first joint of the posterior tarsi nearly twice the length of the second; beneath silvery.

Length 5—5½ lines.

Common on ponds and streams.

6. *aspera*, Schum.

Very like the preceding, but smaller and shorter. Thorax shorter and rather wider; posteriorly the markings darker and more diffused. Elytra shorter. Legs of the same colour, but shorter; the second joint of the posterior tarsi nearly three-fourths as long as the first; beneath silvery.

Length 4½—5 lines.

Moss; Moran, Fifeshire.

7. *gibbifera*, Schum. Fig. Dougl. & Scott, Brit. Hem. pl. xix. fig. 1.

Similar in shape to *G. costæ*, being very wide across the region of the intermediate coxæ. Black, covered with fine golden scales; dorsal keel of the thorax not very distinct. Legs brownish; the front pair pale at the base; first joint of the posterior tarsi very long, twice as long as the second.

Length 5—5½ lines.

Common on ponds and streams.

8. *lacustris*, Linn. Fig. H.-Schff. Wanz. Ins. ix. pl. ccci. fig. 930.

Like the preceding, but smaller; narrower, with a very

distinct dorsal carina to the thorax; the posterior legs shorter, the tibiæ and tarsi together not being so long as the femora; first joint of the tarsi shorter than in *gibbifera*.

Length 4—4½ lines.

Common on water.

9. *odontogaster*, Zett. Fig. H.-Schff. Wanz. Ins. ix. pl. ccci. fig. 931.

Very like *lacustris*, but if anything rather smaller; the front tibiæ black, except at their extreme base, which is red; posterior legs shorter; the ♂ at once distinguishable by the two teeth that project from the sixth abdominal segment beneath.

Length 3½—4 lines.

Not rare; Reigate, Gravesend, Lee, Esher, &c.

10. *argentata*, Schum. Fig. H.-Schff. Wanz. Ins. ix. pl. ccci. fig. 932.

The smallest of our species, very like the two preceding, but distinguishable by the very short posterior tibiæ and tarsi, which together are not nearly so long as the femora; it has also rather a brighter and more silvery appearance, there being often some silvery scales at the base of the thorax.

Length 3—4 lines.

Not common; Esher, Reigate, &c., &c.

#### MICROVELIA.

1. *pygmæa*, Duf. Fig. Dougl. & Scott, Brit. Hem. pl. xix. fig. 3.

Very small, black; head with a line on each side, on the inner margin of the eye, silvery. Thorax very wide behind, with the angles produced and rounded; callosities and the front margin with a band of silvery hairs. Elytra grey, with paler grey or white markings. Legs with the femora at the base pale. Antennæ pale at the base of the first joint.

Length ¾ line.

Not rare in streams, &c.; generally undeveloped.

Undeveloped form, without elytra and with the thorax not so widened posteriorly.

## VELIA.

1. *currens*, Fab. Fig. Dougl. & Scott, Brit. Hem. pl. xix. fig. 2.

Brown; head black. Thorax deeply punctured, with the anterior margin paler, and a bright silvery spot near each anterior angle. Elytra blackish, with two spots near the base, an oval spot in the middle, and a round small spot near the apex, white. Legs and antennæ brown. Posterior thighs in the ♂ denticulate and with two longer teeth on each. Connexivum yellow, spotted with black. The undeveloped form has no elytra.

Length  $3\frac{1}{2}$ —4 lines.

Common in streams, &c., in the undeveloped form. Developed form rare.

## MESOVELIA.

1. *furcata*, Muls. & R. Fig. Ent. Mo. Mag. vol. iv. pl. i. fig. 1.

Elongate, blackish-brown; thorax considerably widened posteriorly, posterior angles rather prominent and largely rounded; scutellum with a deep, transverse channel near the apex, the apex slightly elevated. Elytra pale whitish, very thin, the nerves very thick and black; apices divergent and pointed; connexivum luteous; legs luteous, finely hairy, the apices of the femora and tibiæ and the whole of the tarsi, black; antennæ three-fourths as long as the body, black.

Length 2 lines.

Trent; and several specimens lately taken elsewhere by Dr. Power.

Undeveloped form pale yellowish-green, more or less spotted with black.

## HEBRUS.

1. *pusillus*, Fall. Fig. Dougl. & Scott, Brit. Hem. pl. xix. fig. 4.

Brownish-black, with fine, very short, silvery hairs. Thorax with a deep dorsal impression in front; sides rather deeply emarginate. Elytra with a pale spot on each side of the scutellum; membrane greyish-brown, with paler markings. Legs and antennæ testaceous.

Length 1 line.

Not rare; in ponds, *Sphagnum*, &c.

The undeveloped form is smaller, often has the head red, and is destitute of elytra.

## II. CRYPTOCERATA.

## I. Scutellum large.

A. Abdomen terminating in two long filaments .. *Nepidæ*.

B. Abdomen without apical filaments.

a. Species more or less oval and depressed .. *Naucoridæ*.b. Species more or less elongate, very convex .. *Notonectidæ*.II. Scutellum very small, generally invisible .. .. *Corixidæ*.

## NEPIDÆ.

- a. Body linear, elongate; filaments almost as long as the  
body .. .. .. .. *Ranatra*.
- b. Body elongate, oval; filaments not half the length of  
the body .. .. .. .. *Nepa*.

## RANATRA.

- 1.
- linearis*
- , Linn. Fig. Dougl. & Scott, Brit. Hem. pl. xx. fig. 2.

Elongate, subcylindrical, dull luteous-brown. Thorax slightly constricted near the middle; base deeply emarginate. Elytra about  $2\frac{1}{2}$  times as long as the thorax; body red above; apex terminating in two long filaments. Legs long; front pair with the coxæ more than half the length of the femora; tibiæ recurved, not half so long as the femora; tarsi without claws.

The tibiæ in the other pairs very long, straight; tarsi thin and with long claws.

Length—body without filaments, 16—18 lines.

„ body with filaments, 30—33 lines.

Not common; in ponds, Wandsworth, Hammersmith, &c.

## NEPA.

- 1.
- cinerea*
- , Linn. Fig. Dougl. & Scott, Brit. Hem. pl. xx. fig. 1.

Luteous-brown, flat, wide. Thorax subtrapezoidal. Elytra with the sides rounded; apex somewhat pointed, their surface finely reticulated. Abdomen above red, terminating in two long filaments. Legs mottled; front thighs thick, deeply grooved and excavated beneath at the base.

Length 8—10 lines; with filaments, 12—14 lines.

Common in ponds, &c.

## NAUCORIDÆ.

- a. Front tarsi distinct, two-jointed .. .. *Aphelocheirus*.  
 b. Front tarsi apparently in one piece, with the tibiæ  
 without joints .. .. *Naucoris*.

## APHELOCHEIRUS.

1. *estivalis*, Fab. Fig. Dougl. & Scott, Brit. Hem.  
 pl. xix. fig. 5.

Luteous-brown. Head, legs and some occasional markings paler, dull, short, very much depressed, oval; very finely wrinkled and rugose throughout. Thorax deeply emarginate in front; sides rounded, lateral margins with very short projecting hairs, set at regular intervals; base straight, very wide; sides of the elytra sinuate at the base. All the recent specimens have the elytra rudimentary, about twice the length of the scutellum. Abdomen with each segment produced at the sides backwards into a sharp spine-like tooth.

Length 4—5 lines.

Rare; near Norwich; Bagley Wood, Oxford; Eynsham Paper Mills, &c.

## NAUCORIS.

1. *cimicoides*, Linn. Fig. Dougl. & Scott, Brit. Hem.  
 pl. xix. fig. 6.

Oblong-ovate. Head and thorax shining yellowish-green, in life; punctured with brown, the punctured portion forming a sort of darker spot on each side of the dorsal line. Elytra dull, very densely and finely punctured, greyish-brown. Connexivum pale, finely ciliate; apices of the segments darker; front femora very thick.

Length 5—6 lines.

Common in ponds, &c.

## NOTONECTIDÆ.

- I. Rostrum four-jointed; tarsi two-jointed. (Species large  
 and subelongate) .. .. *Notonecta*.  
 II. Rostrum three-jointed; tarsi three-jointed. (Species small  
 and very short) .. .. *Plea*.

## NOTONECTA.

1. *glauca*, Fab. Fig. Dougl. & Scott, Brit. Hem. pl. xx.  
 fig. 4 = var. *maculata*, Fab., &c.

Very variable in the colour of the elytra. Head and

thorax shining, pale ochraceous or greenish. Scutellum large, black, finely and shortly gold pubescent. Elytra either pale, more or less spotted with black-brown, or glaucous black, with two basal streaks pale; in the var. *maculata* the black-brown spots sometimes almost cover the whole elytra. Legs pale, the intermediate tibiae toothed beneath.

Length 7—8 lines.

Common everywhere in ponds, &c.

### PLEA.

1. *minutissima*, Fab. Fig. Dougl. & Scott, Brit. Hem. pl. xx. fig. 3.

Very small, short and convex, pale yellowish-white; surface reticulated. Head wider than the thorax in front, with a brown line down the centre; apices of the tarsi brown.

Length 1 line.

Common in ponds, &c.

### CORIXIDÆ.

I. Scutellum not visible.

a. Thorax with transverse lines .. .. . *Corixa*.

b. Thorax without transverse lines .. .. . *Cymatia*.

II. Scutellum visible .. .. . *Sigara*.

### CORIXA.

I. Thorax and elytra entirely smooth, not rastrate; asymmetry to left side in ♂.

A. Larger, thorax with 16 or more lines .. *Geoffroyi*.

AA. Smaller, thorax with 12—14 lines.

a. Claws of intermediate legs longer than tarsi .. .. . *affinis*.

b. Claws of intermediate legs shorter than tarsi .. .. . *Panzeri*.

II. Thorax and elytra more or less rastrate; asymmetry to right side in ♂.

A. Posterior metatarsi conspicuously marked with black at the apex; ♂ without strigil.

B. Clavus with longitudinal lines.. .. *Boldii*.

BB. Clavus with transverse lines.

C. Markings of elytra clearly defined.

D. Spot on hind tarsus large and quadrate, or nearly so .. .. . *præusta*.

DD. Spot on hind tarsus small and triangular, placed at the inner apical angle.



- E. Intermediate claws as long as, or longer than, the tarsi.
- a. Thorax in front with a slightly raised tubercle on the dorsal line .. *concinna*.
  - b. Thorax in front without a slightly raised tubercle on the dorsal line .. *cognata*.
- EE. Intermediate claws not so long as the tarsi .. *sodalis*.
- CC. Markings so obscure as to be scarcely observable .. .. . *Wollastoni*.
- AA. Posterior metatarsi not spotted at the apex.
- B. Corium not rastrate.
- C. Thorax pale, with very narrow black lines, very much narrower than the intervening pale spaces .. .. . *hieroglyphica*.
- CC. Thorax with wider dark lines.
- a. Thorax with the dorsal line scarcely perceptible .. .. . *lugubris*.
  - b. Thorax with the dorsal line distinctly raised in front .. .. . *Stål*.
- BB. Corium more or less rastrate.
- C. Thorax without a decided central carina, generally with a slight tubercle near the anterior margin.
- D. Larger species.
- E. Clavus and corium dull, very rastrate.
- a. Thorax with 6 pale lines .. .. *Linnaei*.
  - b. Thorax with 7—8 pale lines .. .. *Sahlbergi*.
- EE. Clavus and corium more or less shining.
- F. Thorax with 6—7 dark lines.
- a. Clavus with the basal lines very wide inwardly .. .. . *striata*.
  - b. Clavus with the basal lines not widened inwardly .. .. . *vernica*.
- FF. Thorax with 8—9 dark lines.
- a. Lobes of prosteronum narrow and twisted *Fallenii*.
  - b. Lobes of prosteronum broad .. .. *distincta*.
- DD. Smaller species.
- E. Intermediate tibiæ scarcely longer than tarsi; tarsi subequal in length to the claws .. *mæsta*.
- EE. Intermediate tibiæ much longer than tarsi; tarsi much shorter than claws.
- F. Thorax with 7—9 pale lines.
- G. Transverse markings of the corium not interrupted by longitudinal dark lines .. *Fabricii*.
- GG. Transverse markings of the corium interrupted by longitudinal dark lines.
- a. By two lines placed near the inner apical angle .. .. *limitata*.
  - b. By three lines .. .. *semistriata*.
  - c. By four lines, one at the inner posterior angle .. .. *venusta*.

- FF. Thorax with 5—6 pale lines.  
 a. Thorax with 6 pale lines .. .. *fossarum*.  
 b. Thorax with 5 pale lines .. .. *Scotti*.  
 CC. Thorax with a distinct, raised, dorsal line.  
 D. Tibiæ much longer than the tarsi.  
 a. Thorax with 10—12 lines .. .. *carinata*.  
 b. Thorax with 8—9 lines .. .. *variegata*.  
 DD. Tibiæ and tarsi subequal in length .. .. *cavifrons*.

Pronotum and elytra not rastrate. *Macrocoris*, Thoms.

1. *Geoffroyi*, Leach. Fig. Dougl. & Scott, Brit. Hem. pl. xx. fig. 5.

Shining olive-brown. Head ochreous; thorax with 16 or more paler, transverse lines; corium and clavus with a few long scattered hairs, very finely and closely mottled with paler markings; beneath and legs testaceous. Distinguishable from the others of this section by its larger size, and the greater number of pale lines on the thorax.

Length 6 lines.

Common in ponds, &c.

2. *affinis*, Leach. Fig. Fieb. Spec. Coris. pl. i. fig. 5 (palæ).

Like the above, but smaller, and the pale markings rather more conspicuous; the palæ much shorter; the pale lines on the thorax fewer, &c. Claws of intermediate legs longer than the tarsi.

Length  $4\frac{1}{2}$  lines.

Lee, Gravesend, &c. Not common.

3. *Panzeri*, Fieb. Fig. Fieb. Spec. Coris. pl. i. fig. 3 (palæ).

Very closely allied to the preceding, but at once distinguished by the much shorter intermediate claws, which are shorter than the tarsi, and also in having the tarsi decidedly longer in proportion to the tibiæ.

Length  $4\frac{1}{2}$  lines.

Not very common. Esher, Gravesend, &c.

Pronotum and elytra more or less rastrate.

Posterior metatarsi conspicuously marked

with black at the apex .. .. *Callicorixa*, B. White.

4. *Boldii*, Dougl. & Scott.

Upper surface finely rastrate, pronotum with 7—8 fine black lines. Elytra with transverse pale markings on the corium; the clavus with longitudinal zigzag markings

down the centre, and transverse markings at the sides; legs testaceous, the spot on the hind tarsus large, reaching quite across the joint.

Length 3 lines.

♀, Gosforth. Distinguishable by the longitudinal markings of the clavus. I have never seen the species.

5. *præusta*, Fieb. Fig. Spec. Coris. pl. i. fig. 17. Var. *socia*, D. & S.

Dull olive-brown, with paler markings. Thorax with 9—10 rather irregular pale lines; clavus with pale transverse bars, the markings becoming irregular towards the apex; corium with irregular transverse wavy markings. Legs testaceous, spot on the hind tarsi large, quadrate or subtrapezoidal (var. *socia*).

Length 3 lines.

Not rare; Lee, Reigate, Scotland, &c.

6. *concinna*, Fieb. Fig. Fieb. Spec. Coris. pl. ii. fig. 9 (palæ).

Very like the above, but with the markings of the thorax rather more regular, and those of the clavus rather less regular. Dorsal line of the thorax indicated by a slight tubercle in front. The most conspicuous character is the small spot on the hind tarsus, which only just fills the inner apical angle of the 1st joint, and the inner basal angle of the 2nd. The palæ also are much longer than in *præusta*.

Length 3 lines.

Lewisham, Lee and Esher.

7. *cognata*, Dougl. & Scott.

Very like the preceding, but differs from it in not having any indication of a tubercle on the anterior margin of the thorax; it is also, if anything, rather smaller and of a yellower colour, and has the spots on the hind tarsi more pronounced and not extending on to the 2nd joint. The palæ in the ♂ are also very different.

Length  $2\frac{3}{4}$ —3 lines.

Scotland; Loch Grienan and Loch Leven.

8. *sodalis*, Dougl. & Scott.

Like the two preceding, but distinguishable by the shorter claws of the intermediate legs, which are distinctly shorter than the tarsi.

Length 3 lines.

Gosforth.

9. *Wollastoni*, Dougl. & Scott.

Differs from all the preceding by its uniform dull colour and almost obsolete markings; the corium is unicolorous, except at the base, where a few paler transverse markings are observable; the spots on the hind tarsi are also more elongate, and the entire insect is very slightly larger.

Length  $3\frac{1}{2}$  lines.

Hebden Bridge, Argyleshire and Rannoch.

Posterior metatarsi not spotted with black at the apex. Corium not rastrate.

10. *hieroglyphica*, Duf. Fig. Fieb. Spec. Coris. pl. i. fig. 20 (pala).

Pale ochreous-white; the thorax with 7—9 very fine black lines; dorsal line slightly raised in front. Elytra: clavus very irregularly barred transversely; corium with smaller mottling than the clavus, the pale colour decidedly dominant.

Length  $2\frac{3}{4}$  lines.

Not uncommon in ditches, &c.

11. *lugubris*, Fieb. Fig. Spec. Coris. pl. i. fig. 10 (pala).

Differs from the above in being darker, the dark lines of the thorax being almost as wide as the pale ones, and the darker colour being dominant on the elytra.

Length  $2\frac{3}{4}$  lines.

Not uncommon in ditches, &c.

12. *Ståli*, Fieb.

Exceedingly like *lugubris*, but rather darker, and with a decided tubercle indicating the dorsal line on the anterior margin.

Length  $2\frac{3}{4}$  lines.

Not uncommon in ditches, &c.

Corium more or less rastrate; dorsal line not distinctly raised for half or more of its length.

## LARGER SPECIES.

13. *Linnæi*, Fieb. Fig. Spec. Coris. pl. vi. fig. 4 (pala).

Black, dull, very rastrate; thorax with 6 well-marked, pale lines; clavus transversely barred with pale lines, straight at the base and more or less irregular and wavy towards the apex; corium with narrow, fine, wavy, transverse lines; beneath, head and legs pale.

Length  $3\frac{3}{4}$  lines.

Common in ponds, &c.

14. *Sahlbergi*, Fieb. Fig. Spec. Coris. pl. ii. fig. 3.

Very like the above, but at once distinguishable by the longer thorax, by the greater number of pale lines (8—9) on it, and the pale apex of the corium; it is also slightly larger.

Length  $3\frac{3}{4}$ —4 lines.

Common in ponds, &c.

15. *striata*, Fieb. Fig. Spec. Coris. pl. ii. fig. 4 (palæ).

Differs from either of the above by its more shining and less rastrate surface. Thorax with 6—7 dark lines, about equal in width to the intervening pale ones. Clavus irregularly marked with pale transverse lines, the basal ones widening inwardly. Corium with transverse, interrupted, pale markings; beneath, head and legs pale.

Length  $3\frac{1}{2}$  lines.

Common in ponds, &c.

16. *vernica*, Walleng. = *Douglasi*, Fieb.

Very like *striata*, but has the thorax more deeply rastrate, and the transverse dark lines somewhat impressed; the pale basal markings of the clavus also are not widened inwardly as in that species.

Length  $3\frac{1}{2}$  lines.

Fens.

17. *Fallenii*, Fieb. Fig. Spec. Coris. pl. ii. fig. 12 (palæ).

Distinguishable from either of the preceding by the greater number of transverse dark lines (8—9) on the thorax, by its more distinct and regular markings, and by the shape of the palæ in the ♂, which are subtriangular; lateral angles of the thorax acute.

Length  $3\frac{1}{2}$  lines.

Common in ditches, &c.

18. *distincta*, Fieb. Fig. Spec. Coris. pl. ii. fig. 13 (palæ).

Exceedingly like *Fallenii*, but differing in the slightly longer thorax, the rather wider, black, transverse lines across it, the obtuse lateral angles, and the short palæ of the ♂, which have the posterior margin regularly rounded.

Length  $3\frac{1}{2}$  lines.

Lewisham, Reigate, &c.

## SMALLER SPECIES.

19. *mæsta*, Fieb. Fig. Spec. Coris. pl. ii. fig. 17.

A short, obscurely-marked species, with a very short thorax and large head; at once distinguishable by the form of the intermediate legs, which have the tarsi only very slightly shorter than the tibiæ, and the claws subequal to the tarsi.

Length  $2\frac{1}{2}$  lines.

Common in ponds, &c.

20. *Fabricii*, Fieb. Fig. Spec. Coris. pl. ii. fig. 16  
(palæ).

= *nigrolineata*, Fieb.

= *perplexa*, D. & S.

= *borealis*, D. & S.

= *Whitei*, D. & S.

= *decora*, D. & S.

= *dubia*, D. & S.

Moderately rastrate, more or less shining; brownish-black, with pale markings.

A very variable species in colour; but I can detect no structural character to separate the varieties from each other. *Nigrolineata* is the palest var., *borealis* the darkest. This species is separable from its allies by the short, rather wide, smooth tubercle on the anterior margin of the thorax.

Length  $2\frac{1}{2}$  lines.

Not rare; in ditches, &c.

Mr. Douglas, in Ent. Mo. Mag. 1875, Nov., unites *decora* and *perplexa* with *Whitei*, and *dubia* with *nigrolineata*. Dr. J. Sahlberg, in his "Synopsis Amphibico-risarum," &c., unites *decora* and *dubia* with *Fabricii* and *nigrolineata*. I feel little doubt, however, that I am right in referring all these varieties to one species.

21. *limitata*, Fieb. Fig. Spec. Coris. pl. ii. fig. 20.

A pale species, with very distinct black markings; longer and narrower than the preceding; the markings on the corium interrupted near the inner apical angle by two black, longitudinal lines; intermediate claws very long, as long or longer than the tibiæ.

Length  $2\frac{3}{4}$  lines.

Common in ditches, ponds, &c.

22. *semistriata*, Fieb. Fig. Spec. Coris. pl. iii. fig. 2 (palæ).

Darker than *limitata*, and at once distinguishable by the pale markings of the elytra being divided into four distinct series by reason of three dark, longitudinal lines; extreme apical margin of corium pale.

Length  $2\frac{3}{4}$  lines.

Not rare; in ditches, &c.

23. *venusta*, Dougl. & Scott.

Very like the preceding, of which it may prove to be only a variety. Brown, with paler markings, very rastrate. Thorax with 6—7 impressed black lines; corium with four longitudinal lines, the first placed at the inner apical angle; extreme apex pale, legs pale, intermediate claws about equal in length to the tibiæ, much longer than the tarsi.

Length  $2\frac{1}{4}$  lines.

Rothsay and Carlisle.

24. *fossarum*, Leach. Fig. Fieb. Spec. Coris. pl. ii. fig. 15.

Var. *prominula*, Thoms.

Rather longer and with clearer markings than *mæsta*, from which the shape of the intermediate legs at once separates it; the thorax has six distinct, pale lines across it. The head, between the eyes, is produced and slightly rounded, the posterior margin deeply emarginate.

Length  $2\frac{1}{2}$  lines.

Common in ponds, &c.

25. *Scotti*, Fieb.

Very like the above, but rather smaller; the head more depressed above, and somewhat angular in front, and very much excavated behind; the posterior angle of the eye almost touching the anterior angle of the thorax, which is traversed by only five pale lines.

Length  $2\frac{1}{4}$  lines.

Argyleshire.

Thorax with a distinct, raised, dorsal line.

26. *carinata*, Sahlb.

= *Sharpii*, Dougl. & Scott.

About the shape of *Fallenii*, &c. Thorax rather deeply rastrate, with 10—12 impressed, dark, transverse lines; dorsal line raised, and very pronounced to beyond the

middle; markings of the elytra obscure and rather small; surface with scattered, long, pale hairs. Legs dusky.

Length 4 lines.

Scotland, Inverness-shire, &c.

27. *variegata*, Walleng.

= *rubricata*, Dougl. & Scott.

Very like *carinata*, but rather smaller, more brightly coloured, with paler legs and head. The thorax is shorter, and has fewer transverse lines, 8—9, and the central carina is less pronounced.

Length  $3\frac{1}{2}$  lines.

Scotland, &c.; not rare.

28. *cavifrons*, Thoms.

= *alpestris*, Dougl. & Scott.

This very distinct species cannot be confounded with any other here described; its large, rounded eyes and bulbous head, and long intermediate tarsi, which are as long as the tibiae, distinguish it at once. The thorax is very rastrate, and has a short, distinctly raised, dorsal line in front, reaching to a little behind the middle; the elytra are rather obscurely marked, and have scattered, long, pale hairs. Legs dusky.

Length 4 lines.

Inverness-shire; at an elevation of 2,000 feet.

#### CYMATIA.

- I. Larger. Thorax nearly as long as the head .. .. *Bonsdorffii*.  
 II. Smaller. Thorax very short, not half so long as the  
 head .. .. .. .. *coleoprata*.

1. *Bonsdorffii*, Sahlb. Fig. Dougl. & Scott, Brit. Hem. pl. xxi. fig. 6.

Head ochreous-brown. Thorax darker, smooth, with a raised median line in front. Elytra obscure brown, with paler transverse markings; in some specimens these markings are scarcely observable. Legs testaceous.

Length  $2\frac{1}{2}$  lines.

Cambridge Fens.

2. *coleoprata*, Fab. Fig. II.-Schff. Wanz. Ins. ix. fig. 915.

Much smaller than the preceding. Head very large and long, obscure brown. Thorax the same colour as the head, very short and transverse; anterior margin



with a small tubercle in the middle, indicating the position of the dorsal line. Elytra dull olive-brown; corium with two longitudinal darker markings. Legs ochreous.

Length  $1\frac{3}{4}$  line.

Cambridge Fens; near London, &c.

#### SIGARA.

1. Thorax as long or nearly as long as the head .. .. *minutissima*.  
 2. Thorax not nearly as long as the head .. .. *Scholtzii*.

##### 1. *minutissima*, Linn.

Var. *Toweri*, Dougl. & Scott.

Head yellowish-white, with a dark spot on the vertex. Thorax brown; the base, and sometimes the dorsal line, pale. Elytra yellowish-white; a large triangular spot on the clavus, a spot on the margin of the corium below the base, an irregular band below the middle, and a spot above the apex, brown. Legs pale; tarsi dark outwardly.

Length  $\frac{7}{8}$  line.

Fens; near Chobham; New Forest.

Var. *Toweri*, Dougl. & Scott, appears to me to be only a darker, more strongly marked variety of this species.

##### 2. *Scholtzii*, Fieb.

Rather larger than the above and paler; the markings on the elytra much smaller and not arranged in bands. The short thorax, however, will at once distinguish it from the preceding.

Length 1 line.

Littlehampton, St. Leonards Forest, &c.

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#### ADDENDA.

Gen. SEHIRUS, p. 120, line 9 from bottom, after "b. About two lines long, blue black," add—

- I. Margin of elytra white; apical joint of antennæ much longer and thicker than third .. .. *albomarginatus*.  
 II. Margin of elytra brownish; apical joint of antennæ subequal to third .. .. *picipes*, Fall.

and after "*albomarginatus*," p. 121, insert following description:—

##### 6. *picipes*, Fall.

Very like the preceding, but distinguishable at once by the smaller apical joint to the antennæ. The colour of

the margins of the elytra is much more obscure, and visible only on their basal half; the membrane also is of a whiter, more opaque colour.

Length 2 lines.

Esher, Hampstead, Chobham, &c.

Gen. TRAPEZONOTUS, p. 148, add—

3. *dispar*, Stål.

Rather larger and more clearly marked than *agrestis*, and, according to Mr. Douglas, different in habits (*vide* Ent. Mo. Mag. xii. p. 223), but I really see no characters by which to distinguish it satisfactorily from *agrestis*.

Page 274. Gen. LYGUS, in Division B., add—

a. Clavus concolorous .. .. *contaminatus*.

b. Clavus brownish .. .. *viridis*.

And after "*contaminatus*," p. 275, add—

= *sulcifrons*, Dougl. & Scott; and after the description of "*contaminatus*"—

2A. *viridis*, Fall.

= *contaminatus*, Dougl. & Scott.

Very like the preceding, but with the thorax more raised posteriorly; the head wider between the eyes, which are smaller and less prominent; the clavus brownish, the spots of the membrane larger, and the spot at the inner angle of the corium larger and less well defined.

Length 3 lines.

On *Spiræa*, &c.; Reigate, Scotland, Croydon, Darent, Esher, &c.

Page 257, line 9 from the foot of the page in Division G., dele "elongate depressed, elytra parallel-sided," leaving only "tibiæ with pale spines;" and then subdivide Division G. thus—

a. Elongate, depressed; elytra parallel-sided *Phylus*.

b. Not elongate, depressed and parallel-sided .. .. *Plesiodesma*.

and add, p. 300, before "ATRACTOTOMUS"—

PLESIODEMA.

1. *pinetellum*, Zett.

Brownish; elytra in the ♀ testaceous. Antennæ luteous; second joint incrassated and compressed in ♂. Elytra

much longer than abdomen; cuneus and cubital nerve of the corium brownish-ochreous; base of the cuneus pale. Cell nerves brownish-testaceous, a little spot below the apex of the cuneus transparent. Legs testaceous; tarsi darker.

Length  $1\frac{1}{4}$  line.

Perth.

Page 305, after "*Psallus varians*," insert—

14A. *diminutus*, Kirsch.

Very like the preceding, but smaller, and with the apical joint of the antennæ rather longer in proportion to the third.

Length  $1\frac{1}{4}$  line.

The small size, which seems to be a pretty constant character, will best serve to distinguish this species. I believe it occurs generally with *P. varians*, of which I have hitherto considered it only a variety.

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#### CORRIGENDUM.

Page 118, line 12 from bottom, for "*Phytocoridae*," read "*Capsidae*."

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#### EXPLANATION OF PLATE XII.

- Fig. 1. *Salda littoralis*.  
 2. „ *C-album*.  
 3. „ *orthochila*.  
 4. „ *morio*.  
 5. „ *arenicola*.  
 6. „ *marginalis*.  
 7. „ *saltatoria*.  
 8. „ *Scotica*.  
 9. „ *cincta*.  
 10. „ *Cocksii*.  
 11. „ *pilosa*.  
 12. „ *pilosella*.  
 13. „ *opacula*.  
 14. „ *elegantula* (antenna).  
 15. „ *Cocksii* (antenna).